



18351 U.S. PTO

## *Description*



### BACKGROUND OF THE INVENTION

#### [0001] 1. Field of the Invention

[0002] The present invention is a combination toothbrush and dental flossing device. More particularly, the device is a toothbrush with an extended shaft with traditional bristles at one end, and a two pronged dental flossing device at the other end.

#### [0003] 2. Description of the Prior Art

[0004] Numerous innovations for toothbrushes have been provided in the prior art described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ significantly from the present invention as hereinafter contrasted. Following is a summary of those prior art patents relevant to the invention at hand. Also provided is a outline describing the differences between the present invention and the prior art.

[0005] 1. U.S. Pat. No. D420,805, Invented by Bahl, Entitled "Combination Toothbrush And Flosser"

[0006] The the patent to Bahl is an ornamental design for a combination toothbrush and flosser as shown and described.

[0007] 2. U.S. Pat No. D283,761, Invented by Chen, Entitled "Combined Toothbrush, Flosser, And Toothpick"

[0008] The patent to Chen is an ornamental design for combined toothbrush, flosser and toothpick as shown and described.

[0009] 3. U.S. Pat. No. 5,331,983, Invented by Father, Entitled "Combined Toothbrush And Dental Flossing Tool"

[0010] In the patent of Father, a combined toothbrush and dental flossing tool is described wherein two joinable tooth brushes, each having a slot extending approximately to the center of the bristle head, co-operate to form a double brush in a y shaped handle and permitting a length of dental floss to be strung through the brushes and across the Y.

[0011] 4. U.S. Pat. No. 5,762,078, Invented by Zebuhr, Entitled "Flosser-Head For A Toothbrush Driver"

[0012] In the patent to Zebuhr comprises a flosser head detachably connected to a motorized toothbrush driver A forked portion of the head includes a pair of spaced tines supporting a movable floss span.

[0013] 5. U.S. Pat. No. 3,850,182, Invented by Clark Jr., Entitled "Combined Toothbrush And Flosser"

[0014] In the patent to Clark Jr, a dental floss or tape holder for use on a toothbrush, wherein a body is provided with a pair of spaced arms made to support a strand of dental floss or tape, with the strand having a teeth cleaning section stretched between the tips of the arms, the body being provided with a socket extending rearwardly thereinto from a forward end of the body, the socket being dimensioned to have the outer end of a toothbrush handle slidably telescoped thereinto to support the holder on the handle. The body defines upper and lower planes, with the arms projecting endwise beyond the handle in prolongation with the handle when the body is supported in the handle.

[0015] 6. U.S. Pat. No. 4,016,891, Invented by Kupperman et al., Entitled "Dental Floss Holder For Detachable Securement To Toothbrush Handle And The Like For Supporting A Strip Of Floss In Taut Condition Ready For Use"

[0016] In the patent to Kupperman et al., a dental floss holder for detachable securement to toothbrush handle and the like for supporting a strip of floss in taut condition ready for use, as described and shown.

[0017] 7. U.S. Pat. No. 4,821,752, Invented by Widlak, Entitled "Oral Hygiene Apparatus Having Replaceable Tooth Engaging Cleaning Element And Internal Dental Filament Dispenser"

[0018] In the patent to Widlak, a personal, oral hygiene instrument is provided that incorporated a replaceable tooth engaging element and a dental filament dispenser into a single, hand held instrument. The instrument includes a hand graspable base member having an internal chamber for storing and dispensing dental filament from one end of the base member. A replaceable tooth engaging cleaning element is detachably received at the opposed end of the hand graspable base member.

[0019] 8. U.S. Pat. No. 3,782,397, Invented by McCord, Entitled "Toothbrush and Dental-Floss Dispenser"

[0020] In the patent to McCord, a toothbrush is described which is so constructed as to contain a novel dental-floss dispenser in the handle thereof.

[0021] 9. U.S. Pat. Des. 362,341, Invented by Sprague, entitled "Combination Toothbrush With Cover And Dental Floss Dispenser"

[0022] In the patent to Sprague, a ornamental design for a combination toothbrush with cover and dental floss dispenser, as shown and described.

[0023] 10. U.S. Pat. No. 5,415,187, Invented by Heneveld, Entitled "Combination Toothbrush, Toothpaste Dispenser And Dental Filament Dispenser"

[0024] In the patent to Heneveld an ornamental design for a combination toothbrush, toothpaste dispenser and dental filament dispenser, as shown and described.

[0025] It is suggested that the closest prior art to the present invention is Patent Number Des.420,805 invented by Bahl. The invention is entitled "Combined Toothbrush And Flosser." However, Bahl device specifically claims a ornamental design for a combination toothbrush and flosser, as shown.

[0026] As outlined above, the other prior art patents largely entail elements such as: decorative toothbrushes and floss dispensers with particular graphics; dental floss dispensers within toothbrush holders, rather than being part of the toothbrush itself; enhanced devices that include toothpaste dispensers; dental flossing devices that are not connected thereinto a toothbrush; and replaceable detachable tooth cleaning devices.

[0027] In contrast to the above, the present invention is a combined toothbrush, floss dispenser and flossing device. The floss is dispensed from within the handle of the toothbrush, secured around a non-slip knob and across a pair of forked tines contain a recessed groove, and re-secured to the non-slip knob for intended use. The present invention includes a rounded floss cutter for user safety. The floss spool within the handle is of a length predetermined to correlate with the recommended life of the toothbrush.

#### SUMMARY OF THE INVENTION

[0028] One objective of the invention is to provide a combination toothbrush, floss dispenser, and flossing device. More particularly a device which comprises a brush head at one end and a flossing device comprising the distal end of the shaft, wherein the flossing device is forked in nature and contains two elongated grooved prongs for accepting of said floss and a non-slip knob for securing of said floss. Invention also provides a rounded cutting tool for safe use and disposal of used floss.

[0029] It is an objective of the invention to provide a device that aids in personal hygiene in multiple ways.

[0030] It is an objective of the invention to provide a product of simple two piece construction that can be mass produced and sold at an affordable price so the general public may enjoy they benefits of the invention.

[0031] Another objective is to provide a convenient and simple way to floss between teeth.

[0032] Furthermore, it is an objective that the flossing device at the distal end of the toothbrush will provide a reminder for users to floss each time they brush.

[0033] Another objective of the invention is to provide a device that can include indicia and graphics, to encourage use by children and adults alike.

[0034] Another objective of the invention is to provide a visual reminder for the user to floss each time they brush.

[0035] Another objective of the invention is to provide a simple means of advancing and securing floss for its intended use.

[0036] Another objective of the invention is to provide an extended shaft for improved means of brushing and flossing the rear teeth in the intended manner.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0037] FIG. 1 is a front elevation view of the combination toothbrush, floss dispenser, and flossing device of the present invention.

[0038] FIG. 2 is a back elevation view of the combination toothbrush, floss dispenser, and flossing device of the present invention.

[0039] FIG. 3 is a side elevation view of the combination toothbrush, floss dispenser, and flossing device of the present invention.

[0040] FIG. 4 is an exploded view of the dental floss dispenser, and flossing device of the present invention.

[0041] FIG. 5 is an exploded view of the toothbrush end of the present invention.

[0042] FIG. 6 is an exploded three-quarter front view of the dental floss dispenser, and flossing device of the present invention.

[0043] FIG 7 is an exploded view of the protective sheath detached.

#### DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0044] A combination toothbrush, floss dispenser, and flossing device comprises an elongated shaft (1) which comprises a brush head (2) at one end thereof. The brush head (2) comprising a plurality of bristles (3) thereon. In the two-piece mode, the flossing device (4) comprising the distal end of the shaft as shown in FIG. 1. and FIG. 2.

[0045] A flossing device (4) being forked in nature and containing two elongated prongs (5). Further comprising an aperture through which floss (6) may be pulled. FIG. 4.

[0046] The flossing device(4) further comprising a non-slip knob (7) for securing said floss (6).

[0047] A spool retaining floss cavity (10) sized to longitudinally receive said floss spool (9), containing the floss (6).

[0048] The floss cavity (10) having a bore opening (11) for dispensing of said floss (6). Functioning to allow the user to pull the floss (6) from the floss spool (9) through the bore opening (11) and rap the floss (6), around non-slip knob (7), across prongs (5), and secure to knob (7) to use the floss (6) in the intended manner.

[0049] The floss device (4) further comprising a cutting tool (14) for removal of used floss. The cutting tool is rounded in nature and recessed to protect the user. FIG. 3.

[0050] A male member (12) extending from the shaft end (1) and received by a female counterpart (13) of distal end (4)

[0051] The male member (12) being slightly smaller in diameter and containing a pair of recessed dimples (16) on apposing exterior walls shown detached in FIG. 5., for securing to the female member (13) and raised dimples (15) shown detached in FIG. 4.

[0052] In general, the shaft (1) is a traditional elongated toothbrush handle, constructed of lightweight and durable plastics, acrylic, nylon, or polymers, intended for use with an oral hygiene instrument. Further being of a length of eight to nine inches for improved access to rear dental areas. Moreover, the shaft may comprise latex or rubber grips thereon, functioning to allow the user to better grip the device.

[0053] The plurality of bristles (3) being constructed of plastic, nylon, acrylic or polymers, in the manner of traditional toothbrush. The brush head (2) to be angled at a previously-determined degree by the manufacturer, and the bristles may be firm, medium, or soft in nature.

[0054] The elongated prongs (5) are grooved in nature (14) FIG. 3 and FIG. 6 for accepting of floss (6).

[0055] The floss spool (9) contains floss (6) of a predetermined length to correlate to the recommended life of the toothbrush head. The floss spool (9) being inserted into the floss cavity (10) and threaded through bore hole (11) FIG. 6.

[0056] Therefore, the present invention aids in personal hygiene, is compact in size, is manufactured of lightweight and inexpensive material, and is of simple two piece construction for ease of manufacturing.

[0057] Without further analysis, the foregoing will so fully reveal the gist of the present invention, and its improvement on prior art. What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims.